Abstract

Various embodiments of the present invention are directed to bimodal virtual device approaches (that is, "bimodal devices"). In certain embodiments, the bimodal device is a virtual device that is primarily based on a real piece of hardware to provide a broad degree of compatibility with software running in the guest environment (similar to the hardware device virtualization approach). However, to overcome the problem of poor performance that plague hardware virtual devices, these embodiments also provide an idealized "high-performance mode" that is not found in the original hardware-based device. Software drivers (and other software) developed for interacting with the original hardware device and which are unaware of (and unable to use) the high-performance mode will continue to use the "legacy mode" (hardware virtualization), while enhanced versions of guest software will be able to recognize and utilize the high-performance mode (idealized virtualization).